DOCUMENT RESUME

ED 107 037 EC 072 617

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TITLE Reported Emotional/Behavioral Problems Among Hearing Impaired Children in Special Educational Programs: United States, 1972-73. (Series R, No. 1).
INSTITUTION Gallaudet Coll., Washington, D.C. Office of Demographic Studies.
PUB DATE Feb 75
NOTE 16p.

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS Age Differences; *Aurally Handicapped; *Behavior Problems; Demography; Educational Background; *Emotional Problems; Etiology; Exceptional Child Research; Hearing Loss; *Incidence; Racial Factors; Sex Differences; *Statistical Data

ABSTRACT

A 1972-73 survey of 43,946 students in special education programs for the hearing impaired provided data on the relationship of reported emotional/behavioral problems to the following demographic variables: program type, sex, ethnic background, birth year, age at onset, degree of hearing loss, etiology, and existence of additional handicapping conditions. A total of 3,438 students were reported as having educationally significant emotional/behavioral problems. The greatest differences in rates of reporting emotional/behavioral problems were related to the student's sex (higher rates among males) and the presence or absence of other handicapping conditions (higher rates among those with other handicapping conditions). (Author/LS)

ED107037

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Series R
Number 1

REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS AMONG HEARING IMPAIRED CHILDREN IN SPECIAL EDUCATIONAL PROGRAMS: UNITED STATES, 1972-73

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ABSTRACT

During the 1972-73 school year demographic data were collected on 43,946 students in special education programs for the hearing impaired by the Annual Survey of Hearing Impaired Children and Youth, Office of Demographic Studies, Gallaudet College, Washington, D.C. Of this number, 3,438 students were reported as having educationally significant emotional/behavorial problems. The relationship of reported emotional/behavioral problems to other demographic information was examined. The student's sex and the presence or absence of additional handicapping conditions were the two characteristics most closely associated with variations in the frequency of reported emotional/behavioral problems. Little relationship was found between the frequency of reported emotional/behavioral problems and the age at onset of the student's hearing loss or the degree of hearing loss.

EC071217

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Washington, D.C.

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February, 1975

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REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS AMONG HEARING IMPAIRED CHILDREN IN SPECIAL EDUCATIONAL PROGRAMS UNITED STATES: 1972-73

INTRODUCTION

Since 1968 the Annual Survey of Hearing Impaired Children and Youth has been conducted by the Office of Demographic Studies at Gallaudet College, Washington, D.C. For the 1972-73 school year basic demographic information was obtained for 43,946 students in 2,409 schools comprising 712 "programs" or "reporting sources" for the hearing impaired. These 712 programs constitute 68% of the programs known to be in operation that year, but the 43,946 students represent approximately 80% of the total population of students receiving special educational services related to their hearing impairment, a population estimated at 54,000.

Since the data on which this report is based were collected from these educational programs, the variable under study is best labeled "reported educationally significant emotional/behavioral problems." No independent verification of reported handicaps was possible, nor was any attempt made to determine the process by which a given reporting source decided to report an emotional/behavioral problem for a particular student. That there were differences among programs in this regard is clear from the fact that the proportion of students reported as having emotional/behavioral problems varied from 1.6% to 28.0% in schools of comparable size. Despite these methodological limitations, the data at least provide the basis for beginning to develop prevalence estimates for emotional/behavioral problems, regarding which there has been much speculation and only small studies with limited samples.

Consideration has been given to reported educationally significant emotional/behavioral problems along with other reported additional handicapping conditions in publication D-14 from the Office of Demographic Studies (Gentile and McCarthy, 1973), using data from the 1971-72 school year. The present study is based on data from the subsequent school year, 1972-73, and aims at displaying the relationships between frequency of reported emotional/behavioral problems and other demographic variables.

While some attention has been given to the psychiatric problems of the deaf (e.g., Rainer, Altshuler, & Kallmann, 1969; Altshuler & Rainer, 1969; etc.), these studies have not included prevalence estimates for the general deaf population. Myklebust (1964) briefly discusses two small-sample studies of his own which yielded prevalence rates ranging from 15% to 33% for various categories of deaf students. Overall, however, Myklebust agrees that "Unfortunately, available statistics relative to the number of individuals with deafness who are mentally ill or have other marked emotional disturbances are inadequate" (p. 376). A recent report from the National Center for Educational Statistics (Metz, 1973) gives a prevalence rate of 1.2% for emotional disturbances among children in local public schools, as reported by school principals (p. 114). This figure seems exceptionally low in view of the fact that most of the estimates from knowledgeable sources in educational and mental health fields range from 10% to 20%, or more.

THE 1972-73 ANNUAL SURVEY DATA

The 43,946 students in the Annual Survey consisted of 23,704 males (53.9%) and 20,088 females (45.7%); the sex of 154 students (0.4%) was not reported. The data from this last group were eliminated from this study for the sake of simplicity. Emotional/behavioral problems were reported for 2,320 males (9.8%) and for 1,118 females (5.6%). These sex differences are in accord with the general expectation of the mental health professions that in the case of children a substantially higher proportion of males than females will be referred for treatment.

Table 1 gives frequency and percent distributions of emotional/behavioral problems for both sexes according to the type of special educational program in which the student is enrolled. Not surprisingly, educational units for multiply handicapped students show the highest proportion of students with reported emotional/behavioral problems, since these problems, along with the hearing loss, may have been the very reason for the placement of a student in a program for the multiply handicapped. Furthermore, as will be seen below, the percentages of emotional/behavioral problems are higher among those students who have multiple handicapping conditions in addition to a hearing loss.

TABLE 1: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY PROGRAM TYPE AND SEX: 1972-73

Type of Program	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
TOTAL	43,792	40,354	3,438	23,704	21,384	2,320	20,088	18,970	1,118
Residential School for Deaf	18,485	17,149	1,336	10,238	9,340	898	8,247	7,809	438
Day School for Deaf	4,942	4,622	320	2,626	2,417	209	2,316	2,205	111
Full-Time Special Education	11,315	10,216	1,099	6,027	5,267	760	5,288	4,949	339
Part-Time Special Education	2,573	2,373	200	1,325	1,190	135	1,248	1,183	65
Itinerant Program	3,288	3,128	160	1,716	1,610	106	1,572	1,518	54
Resource Room	115	98	17	60	47	13	55	51	4
Speech & Hearing Clinic	966	928	38	534	504	30	432	424	8
Parent-Child Program	346	334	12	189	182	7	157	152	5
Other	565	530	35	317	296	21	248	234	14
Residential School for Multiply Handicapped	716	593	123	411	337	74	305	256	49
Program for Multiply Handicapped	481	383	98	261	194	67	220	189	31

TABLE 1 (continued): PERCENT DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY PROGRAM TYPE AND SEX: 1972-73

Type of Program	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Percent								
TOTAL	100.0	92.1	7.9	100.0	90.2	9.8	100.0	94.4	5.6
Residential School for Deaf	100.0	92.8	7.2	100.0	91.2	8.8	100.0	94.7	5.3
Day School for Deaf	100.0	93.5	6.5	100.0	92.0	8.0	100.0	95.2	4.8
Full-Time Special Education	100.0	90.3	9.7	100.0	87.4	12.6	100.0	93.6	6.4
Part-Time Special Education	100.0	92.2	7.8	100.0	89.8	10.2	100.0	94.8	5.2
Itinerant Program	100.0	95.1	4.9	100.0	93.8	6.2	100.0	96.6	3.4
Resource Room	100.0	85.2	14.8	100.0	78.3	21.7	100.0	92.7	7.3
Speech & Hearing Clinic	100.0	96.1	3.9	100.0	94.4	5.6	100.0	98.1	1.9
Parent-Child Program	100.0	96.5	3.5	100.0	96.3	3.7	100.0	96.8	3.2
Other	100.0	93.8	6.2	100.0	93.4	6.6	100.0	94.4	5.6
Residential School for Multiply Handicapped	100.0	82.8	17.2	100.0	82.0	18.0	100.0	83.9	16.1
Program for Multiply Handicapped	100.0	79.6	20.4	100.0	74.3	25.7	100.0	85.9	14.1

The primary ethnic backgrounds of students with emotional/behavioral problems are presented in Table 2. Interestingly, whites and blacks show approximately equal percentages within each sex group, while students of other specific backgrounds (including Spanish-American, American Indian, Oriental, etc., all grouped in the table under the category "Other") show somewhat lower percentages. The lowest percentage in Table 2 is that for students whose ethnic background was not reported; there seems to be no satisfactory explanation for this phenomenon.

TABLE 2: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY PRIMARY ETHNIC BACKGROUND AND SEX: 1972-73

Primary Ethnic Background	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
TOTAL	43,792	40,354	3,438	23,704	21,384	2,320	20,088	18,970	1,118
White	28,705	26,248	2,457	15,658	14,000	1,658	13,047	12,248	799
Black	5,663	5,185	478	2,978	2,656	322	2,685	2,529	156
Other	3,172	2,979	193	1,717	1,586	131	1,455	1,393	62
Not Reported	6,252	5,942	310	3,351	3,142	209	2,901	2,800	101

TABLE 2 (continued): PERCENT DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY PRIMARY ETHNIC BACKGROUND AND SEX: 1972-73

Primary Ethnic Background	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Percent								
TOTAL	100.0	92.1	7.9	100.0	90.2	9.8	100.0	94.4	5.6
White	100.0	91.4	8.6	100.0	89.4	10.6	100.0	93.9	6.1
Black	100.0	91.6	8.4	100.0	89.2	10.8	100.0	94.2	5.8
Other	100.0	93.9	6.1	100.0	92.4	7.6	100.0	95.7	4.3
Not Reported	100.0	95.0	5.0	100.0	93.8	6.2	100.0	96.5	3.5

Table 3 presents the distribution of emotional/behavioral problems by grouped birth year of the student. This table has some particularly interesting features. While the distribution of reported emotional/behavioral problems remains relatively constant for females, there is much more variation in the distribution for males. The male percentages are highest for the years 1958 through 1965, with peaks in 1958-59 and 1964-65. These, of course, were the years of the rubella epidemics, and the present data support the statement of Vernon (1967) that maternal rubella, in addition to causing hearing losses in infants, can also cause brain damage which may later manifest itself in emotional/behavioral disorders.

TABLE 3: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY BIRTH YEAR AND SEX: 1972-73

Birth Year	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
ALL YEARS	43,792	40,354	3,438	23,704	21,384	2,320	20,088	18,970	1,118
Before 1954	1,263	1,191	72	726	684	42	537	507	30
1954-1955	3,418	3,221	197	1,903	1,773	130	1,515	1,448	67
1956-1957	4,625	4,297	328	2,501	2,291	210	2,124	2,006	118
1958-1959	6,580	5,982	598	3,603	3,183	420	2,977	2,799	178
1960-1961	5,138	4,713	425	2,817	2,528	289	2,321	2,185	136
1962-1963	4,983	4,584	399	2,645	2,381	264	2,338	2,203	135
1964-1965	10,343	9,370	973	5,487	4,826	661	4,856	4,544	312
1966-1967	4,159	3,867	292	2,249	2,052	197	1,910	1,815	95
After 1967	2,981	2,853	128	1,611	1,522	89	1,370	1,331	39
Not Reported	302	276	26	162	144	18	140	132	8

TABLE 3 (continued): PERCENT DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY BIRTH YEAR AND SEX: 1972-73

Birth Year	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Percent								
ALL YEARS	100.0	92.1	7.9	100.0	90.2	9.8	100.0	94.4	5.6
Before 1954	100.0	94.3	5.7	100.0	94.2	5.8	100.0	94.4	5.6
1954-1955	100.0	94.2	5.8	100.0	93.2	6.8	100.0	95.6	4.4
1956-1957	100.0	92.9	7.1	100.0	91.6	8.4	100.0	94.4	5.6
1958-1959	100.0	90.9	9.1	100.0	88.3	11.7	100.0	94.0	6.0
1960-1961	100.0	91.7	8.3	100.0	89.7	10.3	100.0	94.1	5.9
1962-1963	100.0	92.0	8.0	100.0	90.0	10.0	100.0	94.2	5.8
1964-1965	100.0	90.6	9.4	100.0	88.0	12.0	100.0	93.6	6.4
1966-1967	100.0	93.0	7.0	100.0	91.2	8.8	100.0	95.0	5.0
After 1967	100.0	95.7	4.3	100.0	94.5	5.5	100.0	97.2	2.8
Not Reported	100.0	91.4	8.6	100.0	88.9	11.1	100.0	94.3	5.7

Table 4 shows the relationship between frequency of emotional/behavioral problems and the student's age at the onset of the hearing loss. The onset categories in the table correspond roughly to (1) prelingual, (2) postlingual but preschool, and (3) school age. Contrary to what might be expected, the age at onset of the hearing loss does not seem to show a clear relationship with the frequency of occurrence of emotional/behavioral problems.

TABLE 4: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY AGE AT ONSET AND SEX: 1972-73

Age at Onset	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
ALL AGES	43,792	40,354	3,438	23,704	21,384	2,320	20,088	18,970	1,118
Under 3 Years	35,030	32,194	2,836	18,831	16,929	1,902	16,199	15,265	934
3-5 Years	2,008	1,883	125	1,122	1,037	85	886	846	40
6 Years & Over	688	633	55	402	362	40	286	271	15
Not Reported	6,066	5,644	422	3,349	3,056	293	2,717	2,588	129

TABLE 4 (continued): PERCENT DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY AGE AT ONSET AND SEX: 1972-73

Age at Onset	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Percent								
ALL AGES	100.0	92.1	7.9	100.0	90.2	9.8	100.0	94.4	5.6
Under 3 Years	100.0	91.9	8.1	100.0	89.9	10.1	100.0	94.2	5.8
3-5 Years	100.0	93.8	6.2	100.0	92.4	7.6	100.0	95.5	4.5
6 Years & Over	100.0	92.0	8.0	100.0	90.0	10.0	100.0	94.8	5.2
Not Reported	100.0	93.0	7.0	100.0	91.3	8.7	100.0	95.3	4.7

Table 5 displays the relationship between the occurrence of emotional/behavioral problems and the student's degree of hearing loss measured by the better ear average categories proposed by the Committee on Conservation of Hearing of the American Academy of Ophthalmology and Otolaryngology in 1965. The better ear average is calculated from audiometric findings at 500, 1000, and 2000 Hertz (ISO) in the better ear. For females, relatively small differences are observed among the categories, while for males there was a lower rate of reporting of emotional/behavioral problems for those in the least severe category.

TABLE 5: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY DEGREE OF HEARING LOSS AND SEX: 1972-73

Degree of Hearing Loss	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
ALL DEGREES	43,792	40,354	3,438	23,704	21,384	2,320	20,088	18,970	1,118
Normal Limits (<27dB)	1,143	1,071	72	669	621	48	474	450	24
Mild (27-40dB)	1,353	1,257	96	762	693	69	591	564	27
Moderate (41-55dB)	2,570	2,363	207	1,473	1,314	159	1,097	1,049	48
Moderately Severe (56-70dB)	4,585	4,220	365	2,584	2,336	248	2,001	1,884	117
Severe (71-90dB)	9,170	8,442	728	5,043	4,530	513	4,127	3,912	215
Profound (>90dB)	15,588	14,388	1,200	8,165	7,398	767	7,423	6,990	433
Not Reported	9,383	8,613	770	5,008	4,492	516	4,375	4,121	254

TABLE 5 (continued): PERCENT DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY DEGREE OF HEARING LOSS AND SEX: 1972-73

Degree of Hearing Loss	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Percent								
ALL DEGREES	100.0	92.1	7.9	100.0	90.2	9.8	100.0	94.4	5.6
Normal Limits (<27dB)	100.0	93.7	6.3	100.0	92.8	7.2	100.0	94.9	5.1
Mild (27-40dB)	100.0	92.9	7.1	100.0	90.9	9.1	100.0	95.4	4.6
Moderate (41-55dB)	100.0	91.9	8.1	100.0	89.2	10.8	100.0	95.6	4.4
Moderately Severe (56-70dB)	100.0	92.0	8.0	100.0	90.4	9.6	100.0	94.2	5.8
Severe (71-90dB)	100.0	92.1	7.9	100.0	89.8	10.2	100.0	94.8	5.2
Profound (>90dB)	100.0	92.3	7.7	100.0	90.6	9.4	100.0	94.2	5.8
Not Reported	100.0	91.8	8.2	100.0	89.7	10.3	100.0	94.2	5.8

Determining the cause of a hearing impairment is often a very difficult task, and many deaf persons never really know why they became deaf. The issue is further complicated by the possibility of multiple contributing causes. Table 6 shows the relationship between the frequency of emotional/behavioral problems and the number of causes reported for the hearing loss. The percentages of emotional/behavioral problems are clearly higher, in both sexes, for those students for whom multiple causes were reported. It may be that the greater the number of causes, the greater the possibility of neurological damage which manifests itself as a disturbance in behavior or emotional stability.

TABLE 6: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY NUMBER OF REPORTED CAUSES OF HEARING LOSS AND SEX: 1972-73

Number of Reported Causes	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
TOTAL	43,792	40,354	3,438	23,704	21,384	2,320	20,088	18,970	1,118
One Cause	20,441	18,624	1,817	11,060	9,843	1,217	9,381	8,781	600
Two Causes	1,750	1,575	175	977	855	122	773	720	53
Three or More Causes	300	264	36	173	149	24	127	115	12
Not Reported	21,301	19,891	1,410	11,494	10,537	957	9,807	9,354	453
Number of Reported Causes	Percent								
TOTAL	100.0	92.1	7.9	100.0	90.2	9.8	100.0	94.4	5.6
One Cause	100.0	91.1	8.9	100.0	89.0	11.0	100.0	93.6	6.4
Two Causes	100.0	90.0	10.0	100.0	87.5	12.5	100.0	93.1	6.9
Three or More Causes	100.0	88.0	12.0	100.0	86.1	13.9	100.0	90.6	9.4
Not Reported	100.0	93.4	6.6	100.0	91.7	8.3	100.0	95.4	4.6

Table 7 presents the frequency of emotional/behavioral problems in relationship to specific causes of hearing loss. Bear in mind that multiple causes were reported for some students so that the number of causes reported and the number of students will not be the same.

TABLE 7: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY SPECIFIC CAUSES OF HEARING LOSS: 1972-73

Specific Causes of Loss	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
ALL CAUSES	23,756	21,585	2,171	12,929	11,465	1,464	10,827	10,120	707
At Birth									
Total at Birth	17,470	15,802	1,668	9,233	8,125	1,108	8,237	7,677	560
Maternal Rubella	7,718	6,862	856	3,840	3,306	534	3,878	3,556	322
Pregnancy Complications	1,415	1,272	143	780	681	99	635	591	44
Prematurity	2,259	2,022	237	1,243	1,076	167	1,016	946	70
RH Incompatibility	1,369	1,273	96	822	745	77	547	528	19
Trauma at Birth	1,001	894	107	568	500	68	433	394	39
Heredity	3,708	3,479	229	1,980	1,817	163	1,728	1,662	66
After Birth									
Total after Birth	6,286	5,783	503	3,696	3,340	356	2,590	2,443	147
Meningitis	2,335	2,149	186	1,443	1,309	134	892	840	52
Mumps	269	256	13	151	142	9	118	114	4
Measles	899	840	59	469	429	40	430	411	19
Otitis Media	715	662	53	424	386	38	291	276	15
Trauma after Birth	403	365	38	238	211	27	165	154	11
High Fever	1,012	912	100	592	526	66	420	386	34
Infections	653	599	54	379	337	42	274	262	12

TABLE 7 (continued): PERCENT DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY SPECIFIC CAUSES OF HEARING LOSS: 1972-73

Specific Causes of Loss	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Percent								
ALL CAUSES	100.0	90.9	9.1	100.0	88.7	11.3	100.0	93.5	6.5
At Birth									
Total at Birth	100.0	90.5	9.5	100.0	88.0	12.0	100.0	93.2	6.8
Maternal Rubella	100.0	88.9	11.1	100.0	86.1	13.9	100.0	91.7	8.3
Pregnancy Complications	100.0	89.9	10.1	100.0	87.3	12.7	100.0	93.1	6.9
Prematurity	100.0	89.5	10.5	100.0	86.6	13.4	100.0	93.1	6.9
RH Incompatibility	100.0	93.0	7.0	100.0	90.6	9.4	100.0	96.5	3.5
Trauma at Birth	100.0	89.3	10.7	100.0	88.0	12.0	100.0	91.0	9.0
Heredity	100.0	93.8	6.2	100.0	91.8	8.2	100.0	96.2	3.8
After Birth									
Total after Birth	100.0	92.0	8.0	100.0	90.4	9.6	100.0	94.3	5.7
Meningitis	100.0	92.0	8.0	100.0	90.7	9.3	100.0	94.2	5.8
Mumps	100.0	95.2	4.8	100.0	94.0	6.0	100.0	96.6	3.4
Measles	100.0	93.4	6.6	100.0	91.5	8.5	100.0	95.6	4.4
Otitis Media	100.0	92.6	7.4	100.0	91.0	9.0	100.0	94.8	5.2
Trauma after Birth	100.0	90.6	9.4	100.0	88.7	11.3	100.0	93.3	6.7
High Fever	100.0	90.1	9.9	100.0	88.9	11.1	100.0	91.9	8.1
Infections	100.0	91.7	8.3	100.0	88.9	11.1	100.0	95.6	4.4

Maternal rubella can thus be seen to be not only the most frequently reported cause of hearing loss, but also the most frequently associated with emotional/behavioral problems, particularly among males. These figures are in accord with data reported in Table 3 showing higher percentages of emotional/behavioral problems for students born during the years of the rubella epidemics.

About one-third of hearing impaired students for whom data were available were reported as having one or more handicapping conditions in addition to their hearing loss. To examine the relationship between reported emotional/behavioral problems and other reported handicaps, Table 8 gives the distribution of students according to the number of additional handicapping conditions other than the emotional/behavioral problems which were reported. Students with other reported handicaps in addition to their hearing impairment had higher percentages of emotional/behavioral problems. Students with three or more additional handicapping conditions had a lower percentage of emotional/behavioral problems than did students with two additional handicaps, a fact which may be related to the difficulty of differential diagnosis in students exhibiting such extensive impairment in other respects.

TABLE 8: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY NUMBER OF ADDITIONAL HANDICAPS REPORTED: 1972-73

Number of Additional Handicaps	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
TOTAL	43,792	40,354	3,438	23,704	21,384	2,320	20,088	18,970	1,118
No Additional Handicaps	32,965	31,226	1,739	17,570	16,370	1,200	15,395	14,856	539
One Additional Handicap	7,478	6,472	1,006	4,250	3,573	677	3,228	2,899	329
Two Additional Handicaps	2,259	1,745	514	1,304	970	334	955	775	180
Three or More Additional Handicaps	1,090	911	179	580	471	109	510	440	70
Number of Additional Handicaps	Percent								
TOTAL	100.0	92.1	7.9	100.0	90.2	9.8	100.0	94.4	5.6
No Additional Handicaps	100.0	94.7	5.3	100.0	93.2	6.8	100.0	96.5	3.5
One Additional Handicap	100.0	86.5	13.5	100.0	84.1	15.9	100.0	89.8	10.2
Two Additional Handicaps	100.0	77.2	22.8	100.0	74.4	25.6	100.0	81.2	18.8
Three or More Additional Handicaps	100.0	83.6	16.4	100.0	81.2	18.8	100.0	86.3	13.7

The frequency of reported emotional/behavioral problems is related to the presence of specific additional handicapping conditions as well as to the total number of such other conditions. Table 9 presents number and percent distributions according to the specific type of other handicapping conditions reported to be present. Perceptual-motor problems and brain damage are the two handicapping conditions most frequently reported in conjunction with emotional/behavioral problems for both sexes.

TABLE 9: DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY SPECIFIC ADDITIONAL HANDICAPPING CONDITIONS: 1972-73

Condition	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Number								
ALL CONDITIONS	48,459	44,150	4,309	26,306	23,434	2,872	22,153	20,716	1,437
None	32,965	31,226	1,739	17,570	16,370	1,200	15,395	14,856	539
Brain Damage	1,528	1,130	398	967	693	274	561	437	124
Cerebral Palsy	1,290	1,189	101	750	674	76	540	515	25
Epilepsy	409	330	79	218	170	48	191	160	31
Heart Disorder	1,155	992	163	528	447	81	627	545	82
Mental Retardation	3,361	2,791	570	1,898	1,537	361	1,463	1,254	209
Orthopedic	773	705	68	421	378	43	352	327	25
Perceptual-Motor	1,984	1,475	509	1,262	899	363	722	576	146
Visual	3,153	2,695	458	1,624	1,353	271	1,529	1,342	187
Other	1,841	1,617	224	1,068	913	155	773	704	69

TABLE 9 (continued): PERCENT DISTRIBUTION OF REPORTED EMOTIONAL/BEHAVIORAL PROBLEMS, BY SPECIFIC ADDITIONAL HANDICAPPING CONDITIONS: 1972-73

Condition	Both Sexes			Male			Female		
	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh	Total	No Emo/Beh	Emo/Beh
	Percent								
ALL CONDITIONS	100.0	91.1	8.9	100.0	89.1	10.9	100.0	93.5	6.5
None	100.0	94.7	5.3	100.0	93.2	6.8	100.0	96.5	3.5
Brain Damage	100.0	74.0	26.0	100.0	71.7	28.3	100.0	77.9	22.1
Cerebral Palsy	100.0	92.2	7.8	100.0	89.9	10.1	100.0	95.4	4.6
Epilepsy	100.0	80.7	19.3	100.0	78.0	22.0	100.0	83.8	16.2
Heart Disorder	100.0	85.9	14.1	100.0	84.7	15.3	100.0	86.9	13.1
Mental Retardation	100.0	83.0	17.0	100.0	81.0	19.0	100.0	85.7	14.3
Orthopedic	100.0	91.2	8.8	100.0	89.8	10.2	100.0	92.9	7.1
Perceptual-Motor	100.0	74.3	25.7	100.0	71.2	28.8	100.0	79.8	20.2
Visual	100.0	85.5	14.5	100.0	83.3	16.7	100.0	87.8	12.2
Other	100.0	87.8	12.2	100.0	85.5	14.5	100.0	91.1	8.9

SUMMARY

The data presented here indicate that reported educationally significant emotional/behavioral problems among students in educational programs for the hearing impaired are related to a number of demographic variables. The greatest differences in rates of reporting of emotional/behavioral problems are related to the student's sex (higher rates among males) and the presence or absence of other handicapping conditions (higher rates among those with other handicapping conditions).

Survey data of this nature, while answering some questions, always raise a host of others. To what extent would reported emotional/behavioral problems be confirmed by clinical diagnosis? To what degree does a report of an emotional/behavioral problem mean that the student causes a problem rather than has a problem? What differences are there in the answers to these first two questions for children with and without hearing impairments? The Office of Demographic Studies will continue to address various aspects of these questions in future reports, but this remains an area of great concern in the education of hearing impaired children which demands greater attention from a variety of research and service perspectives.

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THE OFFICE OF DEMOGRAPHIC STUDIES

The Office of Demographic Studies was established in 1968 to serve as a national statistical center for the field of deafness. Its purpose is to collect, analyze, and publish information on hearing impaired persons, to provide tabulations, national sampling frames, and other data-oriented services to special educational programs and to professionals in the field, to collaborate in cooperative research projects, and to serve as consultant and resource for projects involving data collection and analysis.

The data collected by the Office are confidential; no information which would permit the identification of an individual or cooperating school as the source of that information is ever released without the permission of the school. Within the limits of this confidentiality, the Office actively encourages the use of its information and services by administrators, researchers, teachers, and others providing services to hearing impaired persons.

In its work of developing and disseminating useful information, the Office has the benefit of the guidance and advice of its National Advisory Committee, whose names are listed earlier in this publication. Among its members are hearing and deaf individuals, administrators, teachers, and specialists from other areas within the field of hearing impairment. Every attempt is made to maintain a wide diversity of interests and competencies, as well as geographic representation, among its members.

Funding for the Office comes from Gallaudet College, whose programs and services receive substantial support from the Department of Health, Education and Welfare. The College is an equal opportunity employer.

At the time this report was written, the Office of Demographic Studies was receiving grant support from the National Institute of Education; the views expressed here are those of the Office and do not necessarily represent those of the National Institute of Education.

The Office of Demographic Studies has published various articles and monographs on hearing impaired students. For further information contact:

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